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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,724	12/05/2003	David J. Giesen	87222AEK	2652

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EXAMINER

GARRETT, DAWN L

ART UNIT

PAPER NUMBER

1774

DATE MAILED: 10/13/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/729,724

Applicant(s)

GIESEN ET AL.

Examiner

Dawn Garrett

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 July 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 6 and 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8-32 and 34-40 is/are rejected.
- 7) ☒ Claim(s) 33 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office action is responsive to the remarks and affidavit submitted July 28, 2006.
2. Applicant previously elected species Inv-11 on page 15 where R_{a, b, c, d, 2, 3, 4} are all fluoro and R_{5, 6, 7, 8} are all *p*-biphenyl. Claims 1-5 and 8-40 read upon the elected species. Claims 6 and 7 remain withdrawn as non-elected.
3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1-5, 8-32, and 34-40 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Matsuura et al. (US 2003/0137239) in view of Nakaya et al. (EP 666298) [both cited by applicant on the I.D.S. received June 30, 2005]. Matsuura et al. discloses organic electroluminescent displays comprising between electrodes a light emission layer containing a host compound and a dopant compound wherein the dopant compound is a phosphorescent compound (see abstract). Matsuura et al. teaches the host material may include known hole transporting material such as aromatic tertiary amines (see par. 77 and page 9). Matsuura et al. discloses several compounds similar to the species under consideration, but does not specifically show the species under consideration. Nakaya et al. teaches in analogous art tetraaryldiamine derivatives according to formula (5) as hole transporting compounds which read upon the species under consideration (see page 6). The variables r7, r8, r9, r10, r13, r14, r11, and r12 may be zero. R₅ and R₆ may be halogen atoms and r5 and r6 may be 4 (see page 6 and abstract). It would have been obvious to one of ordinary skill in the art to have selected the compound according to the species under consideration because Nakaya et al. clearly teaches it according to formulas (1) and (5) and it would have been obvious to one of ordinary skill in the art to have

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selected the compound as the host material of the Matsuura et al. device, because Matsuura et al. teaches a tertiary amine compound is desirable as the host material of the light emission layer. The properties of the host material required by the claims are considered to be inherent, because Nakaya et al. discloses the same compound as applicant.

With regard to claims 29-31, Matsuura et al. teaches iridium-containing complexes comprising phenylpyridine ligands (see pages 5 and 6). The content of the dopant is 0.001 to less than 50% by weight with regard to claim 32 (see par. 46). With regard to claim 34, the host may be part of a polymer chain (see par. 78).

With regard to claims 35 and 36, Matsuura et al. teaches filters for the multi-color light emission apparatus (see par. 104). It would have been obvious to one of ordinary skill in the art to have produced a white light emitting device incorporating color filters, because one of ordinary skill in the art knows that a combination of the colors of the visible spectrum results in white light and furthermore, any desired color of light emission can be achieved through selection of color filters.

With regard to claim 37, Matsuura et al. further discloses fluorescent compounds such as DCM II in the luminescent layer (see Example 2, par 138).

5. Claims 1-5, 8-32, and 35-40 are again rejected under 35 U.S.C. 103(a) as being unpatentable over Aziz et al. (US 6,740,429) in view of Nakaya et al. (EP 666298). Aziz et al. discloses organic light emitting devices comprising a mixed region between the two electrodes (see col. 7, lines 35-46). The mixed region comprises a hole transporting material preferably comprising compounds such as tertiary aromatic amines (see col. 7, lines 49-51). The mixed region further comprises 0.01 to 10 weight percent fluorescent luminescent compound (see col.

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8, lines 40-43) with regard to claim 37. The mixed region may comprise phosphorescent compounds such as fac tris(2-phenylpyridine) iridium (Ir(ppy)) in an amount of 3 weight percent to 30 weight percent (see col. 8, lines 60-66). Aziz et al. fails to disclose the specific tertiary aromatic hole transporting compound now under consideration as the host material. Nakaya et al. teaches in analogous art tetraaryldiamine derivatives according to formula (5) as hole transporting compounds which read upon the species under consideration (see page 6). The variables r_7 , r_8 , r_9 , r_{10} , r_{13} , r_{14} , r_{11} , and r_{12} may be zero. R_5 and R_6 may be halogen atoms and r_5 and r_6 may be 4 (see page 6 and abstract). It would have been obvious to one of ordinary skill in the art to have selected the compound according to the species under consideration because Nakaya et al. clearly teaches it according to formulas (1) and (5) and it would have been obvious to one of ordinary skill in the art to have selected the compound as the host material of the Aziz et al. device, because Aziz et al. teaches a tertiary amine compound is desirable as the host material of the light emission layer. The properties of the host material required by the claims are considered to be inherent, because Nakaya et al. discloses the same compound as applicant.

With regard to claims 35 and 36, it would have been obvious to one of ordinary skill in the art at the time of the invention to have added a color filter to the Aziz et al. device in order to achieve a desired emission color, because Nakaya et al. teaches it is known in the art to use a color filter with a device for controlling light emission color, which would include white color (see Nakaya et al., page 98, lines 37-40).

Allowable Subject Matter

6. Claim 33 is again objected to as being dependent upon a rejected base claim in terms of the host material species currently under consideration, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art fails to teach a phosphorescent polymeric material together with the benzidine-containing host compound currently under consideration as part of a light emitting layer as required by the claims.

Response to Arguments

7. Applicant's arguments filed July 28, 2006 have been fully considered but they are not persuasive. The declaration under 37 CFR 1.132 filed July 28, 2006 is insufficient to overcome the rejection of the claims based upon Matsuura et al. (US 2003/0137239) in view of Nakaya et al. (EP 666298) or Aziz et al. (US 6,740,429) in view of Nakaya et al. (EP 666298) as set forth in the last Office action because: While the declaration shows that some of the materials taught by the prior art references fall outside of the range of properties claimed by applicant, the declaration does not clearly set forth unobvious and unexpected results when selecting materials within the range disclosed by applicant. Applicant states that the materials claimed are more efficient, but that conclusion is not fully supported by the data shown. Per M.P.E.P. § 2145, the arguments of counsel cannot take the place of evidence in the record. *In re Schulze*, 346 F.2d 600, 602, 145 USPQ 716, 718 (CCPA 1965); *In re Geiseler*, 116 F.3d 1465, 43 USPQ2d 1362 (Fed. Cir. 1997). The prior art does not perhaps select materials in the same way as applicant selects them; however, the prior art renders obvious the same combination of materials as applicant and unexpected results with regard to these materials have not been clearly set forth.

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In addition, the claims do not expressly exclude compounds outside the range of those claimed from being present in the device. Furthermore, recitation of a newly disclosed property does not distinguish over a reference disclosure of the article or composition claims. *General Electric v. Jewe Incandescent Lamp Co.*, 67 USPQ 155. *Titanium Metal Corp. v. Banner*, 227 USPQ 773. Applicant bears responsibility for proving that reference composition does not possess the characteristics recited in the claims. *In re Fitzgerald*, 205 USPQ 597, *In re Best*, 195 USPQ 430.

Additionally, with regard to Aziz, applicant argues it is “not clear the generalized teachings of Aziz will work in the absence of the thermal protective element.” It is submitted that a feature such as a thermal protective element is not expressly excluded from the present claims.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dawn Garrett whose telephone number is (571) 272-1523. The examiner can normally be reached Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached at (571) 272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Dawn Garrett
Primary Examiner
Art Unit 1774

October 10, 2006